

## INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE  
INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE  
PENNSYLVANIA RAILROAD AT MILLERSBURG, PA., ON  
NOVEMBER 5, 1926.

January 18, 1927.

To the Commission:

On November 5, 1926, there was a head-end collision between two freight trains on the Pennsylvania Railroad at Millersburg, Pa., resulting in the death of two employees and the injury of five employees.

Location and method of operation

The Williamsport Division is a double-track line extending east and west, while the single-track Lykens Branch leads off to the north at JN block station, which is 0.4 mile east of Millersburg. Trains are operated over both the main and the branch lines by time-table, train orders, and a manual block-signal system. Eastbound train movements from the branch to the main line pass around a compound curve to the left, averaging about 7°; this curve is about 1,250 feet in length and is on a descending grade of 0.8 per cent. At the eastern end of this curve there is a junction switch where the branch-line track connects with what will be referred to for the purpose of this report as the yard lead track; there is then a crossover connecting this lead track with the westbound main track and another cross-over connecting the westbound main track with the eastbound main track. There is a telephone booth between the junction switch and the west switch of the crossover first mentioned, while the point of accident was on the Lykens Branch 115 feet west of the junction switch. Approaching from the east on the main line there is a 10° curve to the left about 1,750 feet in length, followed by about 1,200 feet of tangent extending to the first of the crossover switches; the grade is 0.4 per cent descending.

The signals are operated from JN block station, which is located in the angle formed by the intersection of the main and branch lines, while the switches are hand operated. Signal 1 governs eastbound trains leaving the branch line, and is located 1,341 feet west of the point of accident; its normal position is at stop. Westbound movements on the main line are governed by a home signal located 612 feet east of the point of accident, and by a

distant signal located 5,150 feet east of the home signal. The home signal is a two-arm signal, the top arm, signal 7 being of the three-position, semiautomatic type, and governing the through route; the bottom arm, signal 3, is a two-position, manually-operated signal and governs all routes. Signals 7 and 3 stand normally at stop. The distant signal is connected with home signal 7; it is of the two-position type and normally displays a caution indication. The unlocking of the crossover switches by means of the lock levers located between the rails causes signal 7 either to be held in or to assume the stop position.

The weather was clear at the time of the accident, which occurred at 1.25 or 1.27 a. m.

#### Description

Eastbound freight train extra 3608 consisted of 74 cars and a caboose, hauled by engine 3608, and was in charge of Conductor Keyser and Engineman Bailey. This train departed from Lykens, located at the end of the branch line, 14.7 miles from Millersburg, at 11.35 p.m., November 4, en route to Harrisburg, and was brought to a stop just before reaching JN block station at about 12.35 a. m., November 5. After the route had been lined for a movement to the eastbound track the train proceeded, and was moving at a speed estimated to have been about 4 or 5 miles an hour when it collided with extra 3012, just before reaching the junction switch.

Westbound freight train extra 3012 consisted of 100 empty coal cars and a caboose, hauled by engine 3012, and was in charge of Conductor Mulcahy and Engineman Libby. This train passed UR block station, 4.4 miles east of JN block station, at 1.18 a. m., passed the distant signal, which apparently was displaying a caution indication, passed the home signal, which was displaying a stop indication, ran through the west switch of the crossover connecting the two main tracks, headed in at the east switch of the crossover leading from the westbound main track to the yard lead track, passed the conductor of extra 3608, who was waving violent stop signals with a lantern from the vicinity of the junction switch, entered the junction switch and collided with extra 3608 while traveling at a speed variously estimated to have been from 15 to 35 miles an hour.

Both engines had their head ends badly damaged, although they were not derailed. The first car in extra 3608 was considerably damaged while the first 12 cars in extra 3012 were derailed, the first 8 were practically demolished and the next 2 were badly damaged, while the following 2 cars blocked the main line tracks. Throughout

the remaining portion of the train 9 cars were found to have been knocked off center, the train line had been broken on 15 cars, and on 3 cars the coupler corners were broken, while the body of the caboose had been torn from its frame. The employees killed were the engine-man of extra 3608 and the head brakeman of extra 3012.

#### Summary of evidence

On arrival of extra 3608 at JN block station it was brought to a stop just before reaching signal 1, after which the engine was cut off by Conductor Keyser and proceeded as far as the signal location. At this point the conductor got off and went to the tower to secure permission to move off the Lykens Branch through the cross-overs to the eastbound main track. Operator Beller, after communicating with the dispatcher, verbally informed Conductor Keyser that after eastbound train first BF-10 passed UR block station, 4.4 miles east of JN block station, his train could cross over to the eastbound track and follow that train. Train first BF-10 passed JN block station at 1.08 a. m., while Conductor Keyser was in the office. Conductor Keyser went out and lined the switches for the crossover movement, completing this work at about 1.20 a.m., and then remained in the vicinity waiting for his train to pull out. At about 1.21 or 1.22 a. m., his train not having put in an appearance, he went to the telephone booth to communicate with the operator and just as he was about to enter the booth he noticed extra 3012 approaching, at such a high rate of speed that it was obvious it would not get stopped at the westbound home signal, which was displaying a stop indication. Conductor Keyser immediately ran from the booth and began waving violent stop signals, which were not acknowledged, extra 3012 passing him at a speed of about 15 miles an hour, working steam; the train then headed in on the Lykens Branch and collided with extra 3608, which in the meantime had started to move toward the main track. Conductor Keyser stated that he did not have time enough to reach the switches and close them after definitely realizing that extra 3012 was not going to stop at the home signal; the switch lamps, however, were lighted, and were displaying stop indications. Fireman Keefer and Head Brakeman Michaels, of extra 3608, were riding on the engine while rounding the curve at a speed of about 5 or 6 miles an hour, coming off of the Lykens Branch, they were unaware of anything wrong until they saw the violent stop signals waved by Conductor Keyser and they said that they then shouted a warning of danger to Engineman Libby who immediately applied the air brakes in emergency. The fireman and head brakeman saw the headlight of extra 3012 follow the Lykens Branch and they said engine 3012 was still

~~working steam when they jumped, just before the accident occurred.~~

Engineman Libby, of extra 3012, stated that engine 3012 was in good condition, the air brakes worked properly and there were no steam leaks to obscure his view of signal indications. When approaching the distant signal he observed it, displaying a clear indication, and when within about two or three car-lengths of it he called its indication "clear" to Fireman Meader and Head Brakeman Sees, and they replied in the affirmative. On nearing the east switch of the yard at Millersburg, this switch being located approximately 3,000 feet east of the home signal, he looked at his watch and noted that it was 1.23 a. m. He then started to measure the water in the tender, standing up and turning around preparatory to going back, but on seeing the fireman picking down coal he decided to wait until the fireman had finished; by this time the engine was on the straight track approaching the home signal and he said that Head Brakeman Sees was sitting on the left seat box and held up his right hand to indicate a "clear" indication at the home signal. Engineman Libby said that he again sat on his seat box, when about 45 car-lengths from the home signal, and he remembered placing his arm on the arm rest, while en reaching a point about 15 or 18 car-lengths from the home signal he saw stop signals being given with a white lantern from the vicinity of the telephone booth, but as it frequently occurred that crews were switching in that vicinity he paid no further attention to the stop signals, assuming that they were not intended for him, although he did open the automatic bell-ringing valve. When about three car-lengths from the home signal he looked ahead from the side cab window, which was open, and he said he could plainly see the mast of the signal by the reflection of the headlight. Engineman Libby said, however, that he did not observe the indication displayed by the home signal, that he did not see the switch lights, or anything else, and that he did not apply the air brakes in emergency prior to the accident, at which time the speed of his train was about 15 or 18 miles an hour, with the engine working steam. He further stated that he was in his usual good health and that he had no troubles that diverted his mind away from his regular duties, while his statements indicated that he had had adequate rest during his off-duty period. Engineman Libby further stated that about August 30, 1926, he underwent a physical examination, conducted by the medical examiner of the relief department of the railroad, at Sunbury, Pa., his eyes being tested at the same time; he could not pass the vision test with the glasses he was wearing at the time but after having the

glasses corrected he was subjected to another vision test, which he passed successfully. On the night of the accident he was wearing his corrected glasses. Engineman Libby admitted that the accident was caused by his failure to observe or remember anything after seeing the signal mast, saying that he must have fallen asleep or lapsed into a state of coma.

Fireman Meader, of extra 3012, who was thoroughly familiar with the territory in the vicinity of the point of accident, said he observed the distant signal displaying a clear indication, and that on reaching a point about two or three car-lengths distant from this signal, at which time the speed of the train was about 15 miles an hour, the engineman, the head brakeman and himself called its indication to each other. Fireman Meader said that he then started to pick down coal and made no effort to observe the home signal, assuming that the track ahead was clear and that the home signal would also be displaying a clear indication. After picking down coal he placed the pick on the right bulk head and took a step or two forward toward the right side of the gangway to ascertain the location of the train, and it was at this time that the collision occurred.

Conductor Mulcahy, of extra 3012, said that the distant signal was at caution when the caboose passed it, moving at a speed of 18 or 20 miles an hour. Flagman Hontz said he was riding on the left side of the cupola of the caboose, that the distant signal was displaying a caution indication, and that after the engine had passed the home signal he saw the home signal displaying a stop indication. He estimated the speed of his train to have been from 15 to 18 miles an hour between UR block station and the point of collision.

Operator Beller, stationed at JN block station, stated that when he authorized the operator at UR block station, shortly before 1.17 a.m., to allow extra 3012 to enter the block the home signal at JN block station was displaying a stop indication and the distant signal a caution indication, according to the block signal indicators in the tower, and that these signals had been displaying these indications since westbound train No. 581 passed JN block station at 12.06 a. m. It was about 1.10 a. m. when Conductor Keyser, of extra 3608, went out of the office to line the switches for the crossover movement of his train from the Lykens Branch, and he thought it was about 1.13 a. m. when the conductor threw the first locking lever, which locked the westbound home signal in the stop position and the distant signal in the caution position. The operator at UR block station reported extra 3012 as passing that station at 1.18 a. m. and Operator Beller said its headlight came into view at about 1.23 or 1.24 a.m. Up until this time he had not noticed extra 3608 moving from the branch toward the main line, but at about the time

extra 3012 came in sight he saw stop signal being given from a point near the westbound main track, although he could not tell from his position in the tower whether it was intended for extra 3012 or extra 3608. Realizing that there was impending danger, however, he jumped to the lever to throw signal 1 against the branch line train, but it was too late, as at this time the branch train was passing the tower, the collision occurring immediately afterwards. Shortly afterwards the fireman of extra 3012 came into the office and asked him what the trouble was, saying that the distant signal was displaying a clear indication; Operator Beller said he then notified Signal Maintainer Farley of what the fireman had said and that the signalman came into the office later and told him that in company with Rodman Buffington an examination of the signal had been made and that it had been found to be functioning properly. Operator Beller estimated the speed of extra 3608 to have been about 4 miles an hour at the time of the accident, and that of extra 3012 between 30 and 35 miles an hour, with the engine still working steam.

Supervisor of Signals Knowlton said the signals involved were tested after the accident and that they functioned properly.

#### Conclusions

This accident was caused by the failure of Engineman Libby, of extra 3012, properly to observe and obey signal indications.

Engineman Libby admitted his responsibility for the accident, saying that he failed to observe the indication of the home signal when approaching JN block station and that he failed to observe or to remember anything after seeing the signal mast, being of the impression that he must have suddenly fallen asleep. He claimed, however, that he saw Conductor Keyser giving stop signals and that he thought they were intended for some other crew; not only was there no other crew in sight, but if the engineman's statement is correct then it is difficult to explain why he failed to observe the indication of the home signal or the indications of the crossover switch lamps, all of which were displaying red indications and were directly in line with his vision. Close questioning of Fireman Meador failed to bring from him anything definite as to what Engineman Libby was doing immediately prior to the occurrence of the accident, while in his own case it appeared that he had been very observant of signal indications until his train was approaching the home signal at JN block station, when he then devoted his attention to picking down coal. Both

of these employees said the distant signal was displaying a clear indication for the movement of their train, but not only did the operator say that this signal had been in the caution position since the passage of train No. 581 at 12.06 a. m., its position being shown by the indicator in the tower, but it also appeared that the conductor of extra 3608 began unlocking the switches at about 1.13 a.m., before extra 3612 passed UR block station, 4.4 miles from JN block station, and under the signal arrangement the unlocking of these switches locked both the home and distant signals so that they could not subsequently be changed to the proceed position. A test of the distant signal indicated that there could have been no irregularity in its operation, and a consideration of all the evidence leads strongly to the conclusion that this signal was displaying the proper caution indication and that the employees on engine 3012 either disregarded this indication or passed the signal without having observed its indication.

The members of the crew said the speed of their train was 15 or 20 miles an hour. The block records indicated that the speed had averaged about 30 miles an hour after the train passed UR block station, while the operator at JN block station estimated the speed to have been from 30 to 35 miles an hour at the time of the accident. The condition of the wreckage clearly supported the statements of the operator.

Had an adequate automatic train stop or train control device been in use on this line this accident would have been prevented.

The employees involved were experienced men and at the time of the accident none of them had been on duty in violation of any of the provisions of the hours of service law.

Respectfully submitted,

W. P. Borland,

Director.